

*Genera auctorum.*

- Cryptocosma perlalis*, Led. Wien. ent. Mon. 1863, p. 56, pl. 7.  
f. 11. Brazil.
- Fenaria sevorsa*, Grote, Pap. ii. p. 132. U.S.A.

*Species omitted.*

- Ethnistis eucarta*, Feld. Reis. Nov. pl. 136. f. 28, belongs to the  
*Pyraustinae*.
- Idneodes trectopteralis*, Rag. Ann. Soc. Ent. Fr. 1890, p. 605,  
probably belongs to the *Schcenobiinae*.

3. On a Collection of Lepidoptera obtained in the Arusa  
Galla Country in 1894 by Mr. F. Gillett. By ARTHUR  
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So little has been published respecting the Lepidopterous fauna  
of the country south of Shoa, that the present collection, although  
unhappily in very poor condition, is of considerable interest<sup>1</sup>.

The following is a list of the species:—

## RHOPALOCERA.

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|-----|---|---|
| 1.  | <i>Limnas chrysippus</i> , <i>L.</i> , var. <i>klugii</i> .   | Between 25th September & 1st October.   |
| 2.  | <i>Ypthima asterope</i> , <i>Klug</i> .                       | " "                                     |
| 3.  | <i>Charaxes neanthes</i> ♂, <i>Hewits</i> .                   | " "                                     |
| 4.  | <i>Hypolimnas misippus</i> , <i>L.</i> , var. <i>inaria</i> . | " "                                     |
| 5.  | <i>Junonia sesamus</i> , <i>Trimen</i> .                      | Between 1st October & 19th November.    |
| 6.  | " <i>octavia</i> , <i>Cram</i> .                              | " "                                     |
| 7.  | " <i>cloantha</i> , <i>Cram</i> .                             | " "                                     |
| 8.  | " <i>terea</i> , <i>Drury</i> .                               | Between 25th September & 19th November. |
| 9.  | " <i>cebrene</i> , <i>Trimen</i> .                            | Between 25th September & 21st November. |
| 10. | " <i>clelia</i> , <i>Cram</i> .                               | Between 25th September & 1st October.   |
| 11. | " <i>boöpis</i> , <i>Trimen</i> .                             | Between 1st October & 19th November.    |
| 12. | " <i>orthosia</i> , <i>Godt</i> .                             | Between 25th September & 19th November. |
| 13. | " <i>taveta</i> , <i>Rogenh</i> .                             | Between 1st October & 19th November.    |
| 14. | <i>Pyrameis cardui</i> , <i>L</i> .                           | Between 25th September & 1st October.   |
| 15. | <i>Eurytela dryope</i> , <i>Fabr</i> .                        | " "                                     |
| 16. | <i>Byblia ilithyia</i> , <i>Drury</i> .                       | Between 25th September & 19th November. |
| 17. | " <i>acheloia</i> , <i>Wallgr</i> .                           | " "                                     |
| 18. | <i>Hamanunida daedalus</i> , <i>Fabr</i> .                    | Between 25th September & 1st October.   |
| 19. | <i>Neptis agatha</i> , <i>Cram</i> .                          | Between 1st October & 19th November.    |
| 20. | <i>Atella phalantha</i> , <i>Drury</i> .                      | " "                                     |
| 21. | <i>Acræa lycia</i> , <i>Fabr.</i> , var. <i>usagaræ</i> .     | " "                                     |
| 22. | " <i>seis</i> , <i>Feisth</i> .                               | Between 25th September & 19th November. |
| 23. | <i>Pardopsis punctatissima</i> , <i>Boisd</i> .               | Between 25th September & 1st October.   |
| 24. | <i>Polyommatus bæticus</i> , <i>L</i> .                       | Between 1st October & 19th November.    |
| 25. | <i>Catochrysops asopus</i> , <i>Hopff</i> .                   | 21st November.                          |
| 26. | " <i>osiris</i> , <i>Hopff</i> .                              | " "                                     |

<sup>1</sup> Mr. Gillett says that the collection was made at a place called Sheikh Husein, long. about 40° 45' E., lat. 7° 41' S., which accounts for the butterflies being partly Abyssinian and partly Somalian.

27.	<i>Azonus uranus</i> , <i>Butl.</i>	Between 25th September & 1st October.
28.	<i>Tarucus plinius</i> , <i>Fabr.</i>	Between 25th September & 21st November.
29.	„ <i>theophrastus</i> , <i>Fabr.</i> , var. <i>sybaris</i> .	Between 25th September & 1st October.
30.	Lycænid too bad for identification.	Between 1st October & 19th November.
31.	<i>Colias edusa</i> , <i>L.</i> , var. <i>electra</i> .	„ „
32.	<i>Terias zoe</i> , <i>Hopff.</i>	„ „
33.	„ <i>candace</i> , <i>Feld.</i>	Between 25th September & 19th November.
34.	<i>Teracolus eris</i> , <i>Klug.</i>	21st November.
35.	„ <i>ludovicæ</i> , <i>E. M. Sharpe.</i>	Between 25th September & 1st October.
36.	„ <i>evarne</i> , <i>Klug</i> , var. <i>syrtinus</i> .	Between 25th September & 19th November.
37.	„ <i>heuglini</i> , <i>Feld.</i> , var. <i>thruppi</i> .	Between 25th September & 21st November.
38.	„ <i>xanthus</i> , <i>Swinh.</i> , var. <i>comptus</i> .	Between 1st October & 21st November.
39.	„ <i>casta</i> , <i>Gerst.</i> , & var. <i>sipylus</i> ♀.	Between 25th September & 21st November.
40.	„ <i>isaura</i> , <i>Lucas.</i>	Between 1st October and 19th November.
41.	„ <i>pseudacaste</i> , <i>Butler.</i>	Between 25th September & 21st November.
42.	„ <i>celimene</i> , <i>Lucas.</i>	21st November.
43.	„ <i>heliocaustus</i> ♀, <i>Butler.</i>	Between 25th September & 1st October.
44.	„ <i>ansorgei</i> , var. ? <i>Marsh.</i> <sup>1</sup>	Between 1st October & 19th November.
45.	„ <i>vesta</i> , <i>Reiche</i> (int. form).	„ „
46.	„ <i>protomedea</i> , <i>Klug.</i>	„ „
47.	<i>Catopsilia florella</i> , <i>Fabr.</i>	Between 25th September & 1st October.
48.	<i>Belenois boguensis</i> , <i>Feld.</i> , vars.	Between 25th September & 19th November.
49.	„ <i>gidica</i> , <i>Godt.</i> , ♂.	Between 1st October & 19th November.
50.	<i>Herpænia melanarge</i> , <i>Butl.</i>	Between 1st October & 21st November.
51.	<i>Papilio demoleus</i> , <i>L.</i>	Between 25th September & 19th November.
52.	„ <i>bromius</i> , <i>Doubl.</i>	Between 1st October & 19th November.
53.	<i>Papilio erinus</i> , <i>Gray</i> , var.	„ „
54.	„ <i>antinorii</i> , <i>Oberth.</i> , ♀.	„ „
55.	<i>Eretis djælælæ</i> , <i>Wulgr.</i>	Between 25th September & 1st October.

## HETEROCERA.

Only five small species were obtained, and of these only two are in sufficiently good condition to be recognized:—

56.	<i>Syntomis tomasina</i> , <i>Butl.</i>	Between 1st October & 19th November.
57.	<i>Mentaxya albifrons</i> , <i>Hübner.</i>	„ „

All that can be said of the three others is that one is a *Hypenid*, a second a *Macaria*, and the third probably the remains of some form of *Pyralid*.

In this series, although it includes no new species, there are several forms of interest:—The example of *Catochrysois osiris* measuring only ten millimetres in expanse of wings; whilst it is satisfactory to receive typical males of *Teracolus eris*; a female form of *Teracolus heuglini* var. *thruppi* approaching the female of *T. दौरα*, respecting which it will be worth while to make a few

<sup>1</sup> This form has the ashy-whitish basal area of *T. aurigineus* in the males; the discal black band of the primaries varies as in that species, and that of the secondaries is represented by black dashes on a grey ground, as is often the case in *T. aurigineus*, but the under surface is ochraceous with all the markings weakly defined: it may be the dry phase of *T. ansorgei*.

observations. *Teracolus heuglini* of Felder was based upon dry-season examples of a species of which the wet and intermediate phases were not recognized. In his recent paper on the synonymy of *Teracolus* Mr. Guy A. K. Marshall reduced *T. heuglini*, *T. nouna*, and the whole of the *T. antigone* group of *Teracolus* to synonyms of *T. evagore*, totally misunderstanding their seasonal relationships.

In a recent paper on Lepidoptera from Arabia and Somali-land (P. Z. S. 1896, p. 247), Capt. Nurse speaking of *T. yerburyi* observes :—"From all the pupæ emerged typical *T. yerburyi*, except from one which produced *T. nouna*, much to my surprise. I did not notice that one of the larvæ was different from the others, so that the larva of *T. nouna* must closely resemble that described above."

In dry countries like Aden and Karachi the seasonal phases of *Teracolus* are undoubtedly produced simultaneously as mere variations, if produced at all: in the case of *Teracolus phisadia* the male is always a wet-season phase and the female always dry-season; in the nearly allied *T. puellaris* both dry and wet phases of the male occur, but only dry of the female; whereas in the species nearest to the latter (*T. vestalis*) dry and wet forms of both sexes are abundant, but all flying together. Indeed one of Col. Swinhoe's chief objections to Capt. Watson's decision as to the dry and wet forms of *Teracolus* was based upon the fact that at Karachi he took all the so-called 'seasonal forms' flying together throughout the year. That this is not the case where the seasons are well defined has been amply proved, but it appears to be unquestionably true of very hot and dry countries where there is next to no rainfall.

A careful examination of the *T. दौरa* group of *Teracolus* has convinced me that the following are the seasonal forms or phases of the three most nearly allied species :—

Wet-season.	Intermediate.	Dry-season.
1. <i>T. दौरa</i> .	<i>T. odysseus</i> .	<i>T. nouna</i> .
2. <i>T. jacksoni</i> .	<i>T. thruppi</i> .	<i>T. heuglini</i> .
3. <i>T. yerburyi</i> .	<i>T. swinhoi</i> ?	<i>T. evagore</i> .

It will, however, be necessary to note that the dry-season forms, being much alike in these three species, owing to the simple character of their markings, have hitherto been confounded in papers upon the Lepidoptera of Aden and Somali-land. Also *T. swinhoi* is practically a wet-season form with yellow ground-tint, this alone entitling it to be called intermediate; it does not nearly approach *T. evagore* (= *saxeus*), which is the form bred from a larva of *T. yerburyi* by Capt. Nurse.

Other species of interest in Mr. Gillett's collection are :—

A somewhat rubbed male of *Teracolus ludovicie*, a very distinct species related to *T. puniceus* and *T. hetera* (of both of which species I have examined series of both dry- and wet-season forms, and which therefore are certainly not synonymous).

Both sexes of *Teracolus casta* and the female of its wet-season

form *T. sipylus*, clearly proving this to be a well-marked geographical race distinct from *T. evenina*.

An example of what seems to be an intermediate phase of *T. vesta*, differing from the wet-season form of *T. mutans* in its small discocellular black spot, smaller discal salmon-buff spots, larger marginal spots, and strongly defined brown bands on the under surface of the secondaries.

A form which I take to be a dry-season phase of *T. ansorgei*, already referred to in footnote.

Specimens of *Herpænia melanarge* showing considerable variation in size, proving that *H. iterata* (which differs constantly in the red coloration of the markings below) is a nearly allied but distinct geographical race.

Lastly, examples of *Papilio erinus* with unusually narrow blue banding on the upper surface of the primaries.

4. On the Malagasy Rodent Genus *Brachyuromys*; and on the Mutual Relations of some Groups of the *Muridæ* (*Hesperomyiæ*, *Microtinæ*, *Murinæ*, and “*Spalacidæ*”) with each other and with the Malagasy *Nesomyiæ*.  
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(Plates XXXVII.–XL.)

It has been stated not long ago (1893), in a valuable Manual, that the Rodents are amongst the few exceptions to the rule, according to which the Malagasy Mammals belong to peculiar specifically Malagasy genera<sup>1</sup>. This statement, made originally by Rüttimeyer in 1867<sup>2</sup>, was true at that date. In the intervening 28 years five genera, containing six species, of Malagasy Rodents have been brought to notice; several of them, however, were so scantily characterized as to explain the undue neglect to which they have been subjected.

The genus *Brachyuromys* was characterized by me last year<sup>3</sup>, upon specimens collected in Madagascar, the species *B. ramirohitra*, of which a short description was given, being taken as type. In the same place it was pointed out that Bartlett's “*Nesomys betsilcoensis*”<sup>4</sup> is a second species of *Brachyuromys*.

At this Society's Meeting of Dec. 1, 1896<sup>5</sup>, some considerations on the Malagasy Rodents as a whole were presented; the great majority of them I considered to “belong to the so-called Cricetine

<sup>1</sup> K. A. Zittel, ‘Handbuch d. Paläontologie. IV. Vertebrata (Mammalia),’ 1891-93, p. 767.

<sup>2</sup> L. Rüttimeyer, ‘Ueber die Herkunft unserer Thierwelt. Eine zoogeographische Skizze.’ Basel & Genf, 1867, p. 14.

<sup>3</sup> Ann. & Mag. Nat. Hist. ser. 6, vol. xviii, Oct. 1896, p. 322.

<sup>4</sup> P. Z. S. 1879, p. 770.

<sup>5</sup> P. Z. S. 1896, pp. 978-980.